

Casualty Power System



Lesson Topic 3.7

Enabling Objectives



- ① Select the procedures necessary to control and repair damage to shipboard equipment and systems
- Match the following damage control systems with their purpose and locations:
1. Firemain 2. Drainage 3. Ventilation 4. Casualty power

Casualty Power System



- Temporary power if permanently installed & emergency distribution cables are damaged
- Doesn't supply power to all electrical equipment
 - Supplies to vital systems and limited facilities
 - Supplies to a limited number of ordnance items necessary for defense

Casualty Power System



- Important features
 - Preservation of watertight integrity
 - Simplicity of installation & operation
 - Flexibility of application
 - Interchangeability of parts & equipment
 - Minimum weight & space requirements

Components and parts



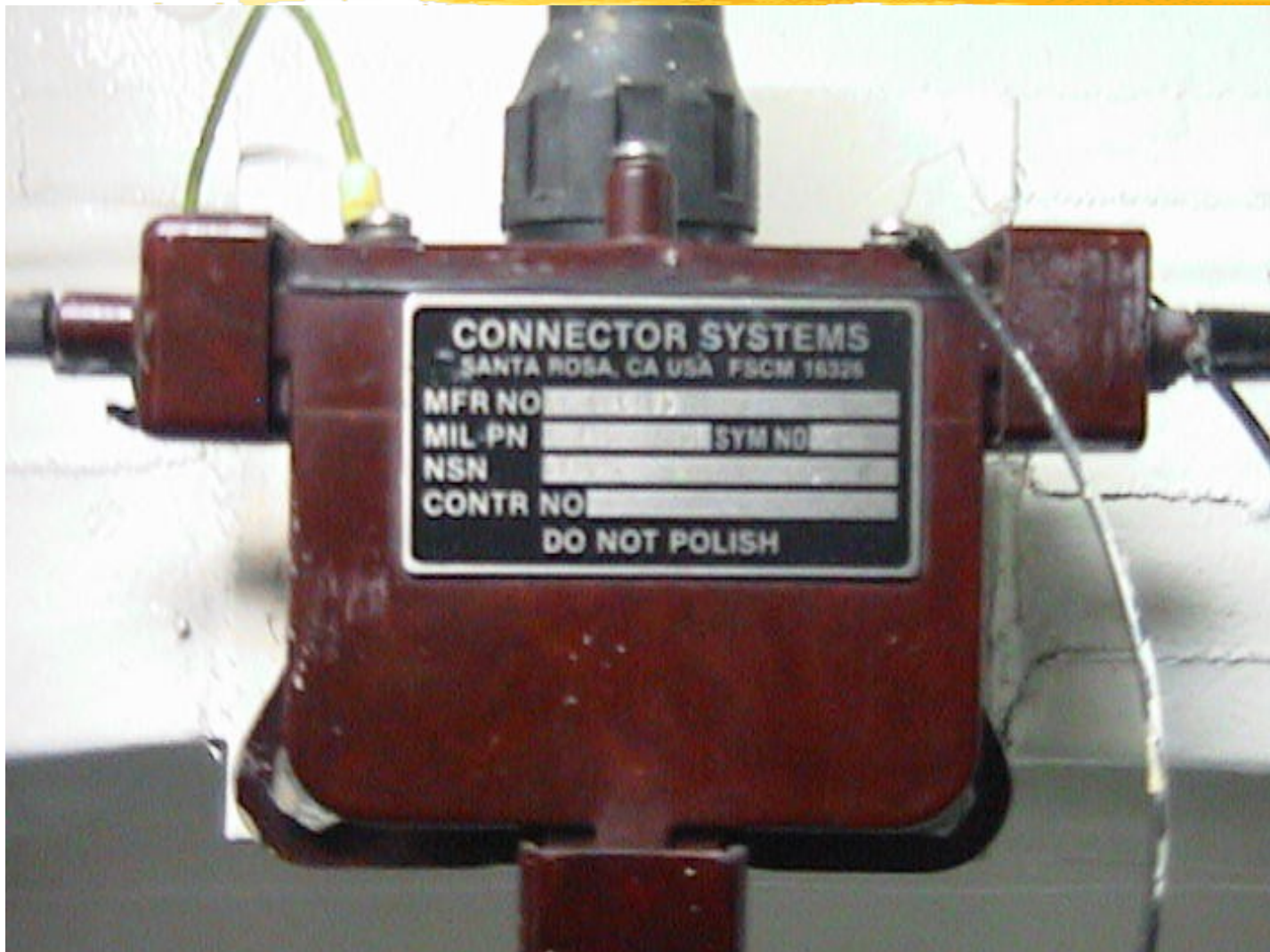
■ Terminals

- Aid in rigging casualty power circuits
- Maintain watertight integrity
- Horizontal/longitudinal cable runs
- Cables can be connected to either end of the bulkhead terminal

Terminal



Terminal



Casualty Power System Components and parts



- Phase identification on terminals
 - Marked with letters A,B,and C
 - Raised buttons - Corresponds to the phase on cable
 - Special tool is provided to secure cable
- Viking casualty power terminals
 - Casualty power cables can only be connected one way due to shape of terminal receptacles
 - Secured to terminal by thumb screws

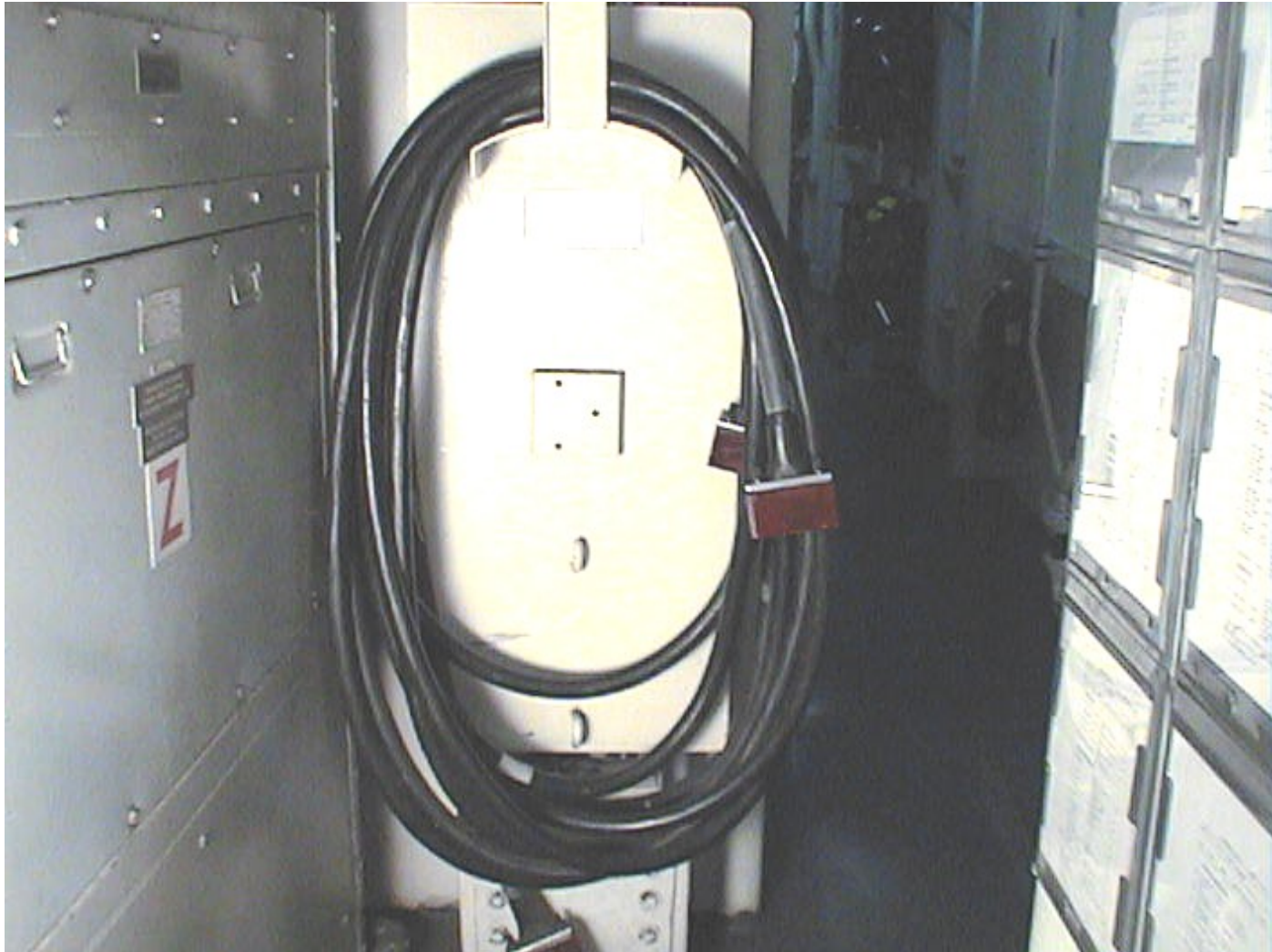
Casualty Power System Components and parts



▢ Cables

- ▮ 93 amperes continuous
- ▮ 200 amperes for 4 hours
- ▮ Additional cable in lengths totaling 150 ft are stowed in damage control repair stations

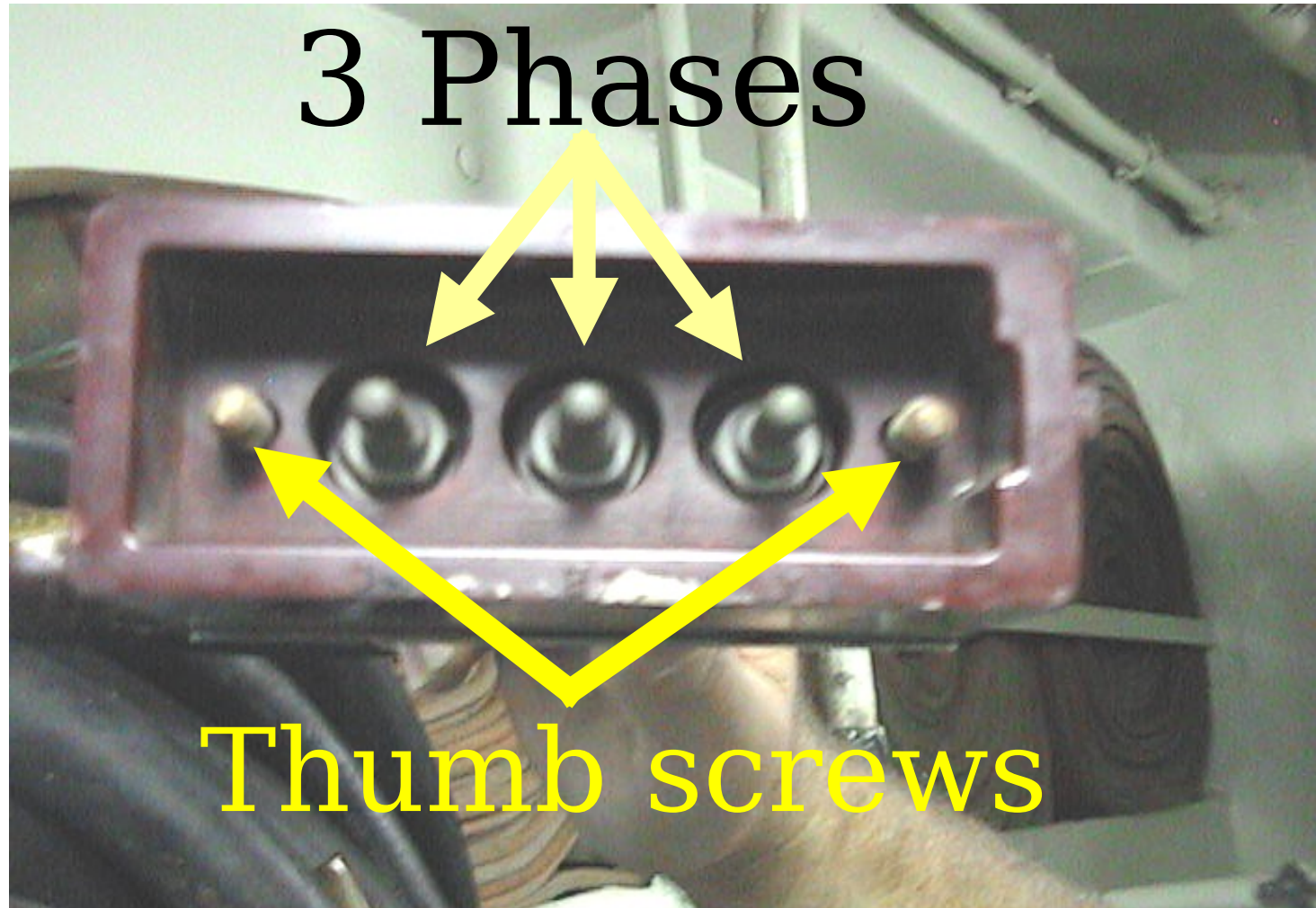
Cables



Cables

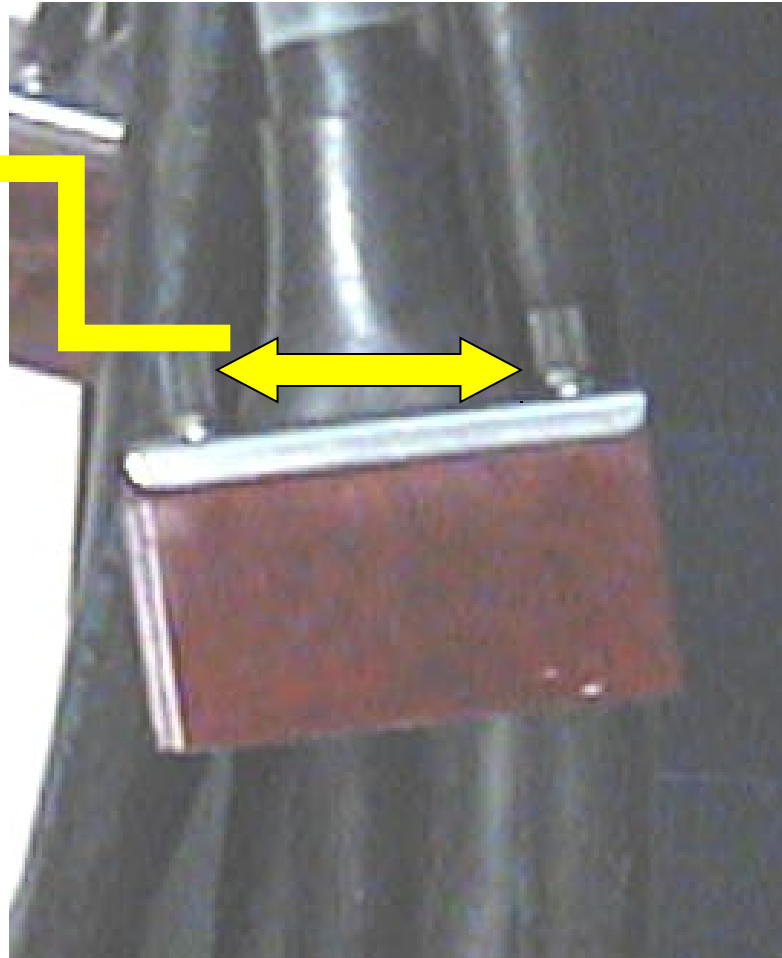


Cables



Cables

**Thumb
screws**



Cable runs



- Small ships
 - One horizontal cable run on main deck
- Large ships
 - Two horizontal cable runs

Phase identification on older cables



- Phase A - One serving, black
- Phase B - Two servings, white
- Phase C - Three servings, red
- Older cables
 - Identical to old method but uses O-rings vice servings

Phase identification on new cables



- One-piece plug in assembly
- Fastened by thumb screws
- Only fit one way
- Installed on DD-963 and CG-47 class ships

Casualty Power System Components and parts



▢ Risers

- ▮ Vertical conduit with terminal at each end
- ▮ Permanently installed or portable cable
- ▮ Connection points for cables between decks
- ▮ Risers Connection located to provide easy connections to vital areas

Casualty Power System Components and parts



■ Vertical risers

- From switchboard compartments
- To power loads
- Total capacity of generator is greater than 500 kW
 - Two vertical port & starboard risers provided
- Capacity is less than 500 kW
 - One vertical port & starboard risers provided

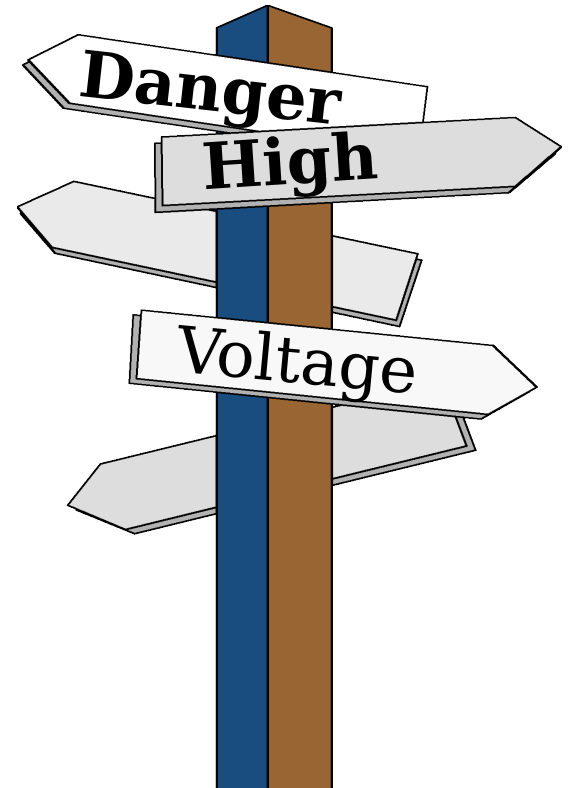
Responsibility for energizing the system



- DCA determines route
- DCO/Engineering Officer will designate the switchboard & riser to be used as the source of power
- Final energizing connection will be made upon direct orders of the DCA

Casualty Power System application

- Post signs “DANGER HIGH VOLTAGE”, at each connection & at 10’ intervals
- load to source



Summary and Review



- Casualty Power System
 - Component Parts
 - Terminals
 - Cables
 - Risers
 - Vertical risers
 - Application